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10/542,201	01/31/2006	Toshihiro Abe	080306.56527US	5492

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EXAMINER

LOPEZ, FRANK D

ART UNIT	PAPER NUMBER
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3745

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/542,201	Applicant(s) ABE ET AL.	
	Examiner F. Daniel Lopez	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 11 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 2,4,6,10 and 12-14 is/are allowed.
- 6) ☐ Claim(s) 1,3,5,7-9 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/11/08</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Applicant's arguments filed August 11, 2008, have been fully considered but they are not deemed to be persuasive.

Applicant argues that when the actuator is being raised, the movement of the actuator as the rod pressure decreases causes the pressure in the lower chamber to decrease, such that the jack up selector valve shifts from position 25a to 25b, shifting valve 26 from position 26a to 26b, allowing the poppet valve to open. Even if the pressure in the lower chamber increases to cause the jack up selector valve to close the valve 26, the poppet valve will stay open. Applicant also indicates that when the actuator is being lowered, if the lower chamber is above the threshold pressure, the jack up selector valve is kept in the position 25a, keeping the valves 26 and 27 in their initial positions 26a and 27a.

The examiner sees a contradiction between Applicant's discussions of raising verses lowering the actuator. When the actuator is being raised, the pressure in the upper chamber is drained, causing the lower chamber pressure to drop below the threshold pressure. When the actuator is being lowered, the pressure in the lower chamber is being drained, so why doesn't the pressure drop below the threshold pressure? Once the lower chamber pressure is below the threshold pressure, the valve 27 would close and stay closed, thereby forcing the poppet valve to open. If the system works for the actuator being raised, as Applicant indicates, then the actuator doesn't work as the Applicant indicates for the actuator being lowered.

The examiner understands that the pressure in the lower chamber is more likely to be controlled by the weight acting on the actuator (i.e. the boom weight and any materials moved by the boom); and is only slightly affected by the draining of the pressure from the upper chamber. Then, the pressure of the lower chamber will stay above the threshold pressure, keeping the jack up selector valve in the 25a position, to keep the valves 26 and 27 in their initial (26a, 27a) positions, thereby preventing the poppet valve from opening. But, when raising the actuator, the pressure of the lower chamber will stay above the threshold pressure, and in the same way preventing the

poppet valve from opening and preventing fluid from going to the lower chamber and the actuator would not raise. Therefore, it is does not work as disclosed and is inoperative

Applicant argues that use of feed pressure and holding pressure, even though they are the same pressure (i.e. the pressure in the lower chamber); they refer to the pressure at different times (when actuator is moving, and when not moving, respectively) and therefore are not confusing. The examiner disagrees. The discussion of the holding pressure indicates that the actuator is moving (claim 1 line 15-16, emphasis added "when the holding pressure...is equal to or higher than the predetermined pressure **upon lowering**"); and since both pressures are at the same time, the use of 2 different terms for the same element is confusing.

Applicant argues that Kamimura does not disclose control of the jack up selector valve as a function of a feed pressure or a function of a holding pressure in the actuator's **lowering chamber** upon lowering the working element (emphasis added). The examiner disagrees. As discussed above there is confusion if the claims include the terms "feed pressure" and "holding pressure". Claim 1 claims "the holding pressure on said hydraulic cylinder" (line 15) which does not indicate that the holding pressure is a particular chamber. Since the above limitations are not in the claims, the reasons Applicant has pointed to for objecting to the 102 rejection is not valid.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Information Disclosure Statement

The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of each foreign patent. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

Specification

The disclosure is objected to because of the following: throughout the specification, the discussion of the operation of all the figures except fig 4 and 10, are incorrect (see 101 rejection below). Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 3, 7 and 9 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a jack-up selector valve (25) which causes a flow line changing valve (26) to close when the directional control valve (22) is in a lowering position (22a) and not when in a raising position (22c), by directing pilot pressure operating the directional control valve to actuate the jack-up selector valve; it is not enabled to do so by directing the pressure from the bottom chamber (11a) to actuate the jack-up selector valve (see 101 rejection below). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The limitations concerning the 2 variable displacement pumps having their displacement controlled by the pilot pressure controlling the directional control valves causes the above claims to be limited to the embodiments of fig 7 and/or 13. These embodiments are enabled by the specification (see 101 rejection below).

Claims 1, 5, 8 and 11 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 line 15 (and throughout the claim “the holding pressure” is confusing, since it appears to be the same as the “feed pressure” of line 8-9.

Claims not mentioned are indefinite, since they depend from claim 1.

Claim Rejections - 35 USC § 101

Claims 3, 7 and 9 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. Claim 7 reads only on the embodiment of fig 13 and claims 3 and 9 read only on the embodiment of fig 7 and 13, due to the limitations of controlling the displacement of the pumps, and there being two pumps. Both of these embodiments have a jack-up selector valve (25) which is actuated and connected to the bottom chamber (11a) of the actuator by a pilot line (36), similarly to how the fig 2 embodiment works. The fig 2 embodiment does not work as disclosed, and therefore the figs 7 and 13 embodiments do not work also (the only embodiments which work are those of fig 4 and 10, where the pilot pressure (in 40) actuating one side of the directional control valve (22) is used to actuate the jack-up selector valve).

The specification states, referring to the embodiment of fig 2, the following:

“When the bottom pressure is higher than a predetermined change-over pressure set by a spring 25c...the selected position of the jack-up selector valve 25 is maintained at the selected position 25a, so that the selected position of the flow control valve 26 is also maintained at the selected position 26a” (page 32 line 17-22);

“Therefore, only the regeneration oil is introduced into the rod chamber 11b, the hydraulic boom cylinder 11 contracts under the dead weight of the boom 5, and the boom 5 is caused to turn in a downward direction (undergoes a so-called free fall)” (page 33 line 5-8);

“When the control lever 23a is operated in...a boom-raising direction,...the directional control valve 22 is changed over to a selected position 22c. As a result, the oil pressure discharged from the rod chamber 11b is returned to the reservoir...Accordingly, the bottom pressure becomes lower than the operating pressure for the jack-up selector valve 25 so that the flow control valve 26 is changed over to the selected position 26b” (page 34 line 12-22).

The specification is saying that when the directional valve 22 is moved to the position 22a, where the bottom chamber is connected to tank by 2 throttle valves (29a, 29b) and a load is pushing the piston towards the bottom chamber to pressurize the

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bottom chamber, the pressure in the bottom chamber will be higher than the force of the spring (25c), but when the directional valve 22 is moved to the position 22c, where the bottom chamber is connected to a pump line (33), rather than to tank, the pressure will be less than this force of the spring. One of ordinary skill in the fluid actuator art would find these statements to be wrong. Any time a chamber is connected to tank, even through a restriction, the pressure will be lower than when the chamber is not connected to tank.

Claim Rejections - 35 USC § 102

Claims 1 and 5 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kamimura. Kamimura discloses a hydraulic working machine comprising a flow line changing valve (16) between a pump (3) and a meter in port of a directional control valve (5) controlling flow to a double acting hydraulic cylinder (6); wherein a piloted (by line 2d) jack-up selector valve (14) is changed over when a feed pressure to the cylinder reaches a predetermined pressure (see fig 3), so that the flow line changing valve is closed, preventing flow from the pump to the directional control valve; and when the feed pressure is lower than the predetermined pressure, the jack-up selector valve is changed over (see fig 2), so that the flow line changing valve is open, allowing flow from the pump to the directional control valve.

Conclusion

Claims 2, 4, 6, 10 and 12-14 are allowed.

Claims 8 and 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Note that this case will not be allowed, until the objection to the specification is dealt with.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is 571-272-4821. The examiner can normally be reached on Monday-Thursday from 6:00 AM -4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on 571-272-4820. The fax number for this group is 571-273-8300. Any inquiry of a general nature should be directed to the Help Desk, whose telephone number is 1-800-PTO-9199.

/F. Daniel Lopez/

F. Daniel Lopez
Primary Examiner
Art Unit 3745
November 13, 2008